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ABSTRACT

The purpose of this study was to develop a survey instrument that could be used to determine the degree to which faculty members perceive themselves to have knowledge and skills that they can use to help their adult students learn how to learn. Informal surveys of students at the Anderson Adult Education Center in South Carolina, which has a high dropout rate, indicated that students dropped out primarily because they found the subjects that they studied uninteresting and unhelpful. The center's director, however, believed that a large part of the problem was due to learning difficulties or a lack of "learning how to learn" knowledge and skills on the part of these students, and this idea led to the development of a survey instrument constructed to identify perceived strengths and weaknesses of the center faculty as regards their ability to model and teach their adult students the art and science of learning. Steps in the process included the following: a literature review that revealed that students need "learning how to learn" skills more than ever; creation of a draft of a survey instrument and its review by a panel of experts; sampling of the instrument with some faculty groups; and creation of the final version of the survey. The completed instrument is expected to be administered to all 16 faculty members of the center as soon as feasible and the results used to create a training program to meet their perceived needs as they go about educating their adult students. (The report includes the survey form and 47 references.) (KC)

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THE DEVELOPMENT OF A SURVEY INSTRUMENT TO ASSESS THE "LEARNING HOW TO LEARN" KNOWLEDGE AND SKILLS OF ADULT EDUCATORS IN THE DEPARTMENT OF ADULT EDUCATION IN ANDERSON COUNTY

Human Resources Development

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A practicum report presented to Nova University in partial fulfillment of the requirements for the degree of Doctor of Education

Nova University

November, 1992

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Abstract of a Practicum Report Presented to Nova University

in Partial Fulfillment for the Requirements for the

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The Development of a Survey Instrument To Assess The "Learning How to Learn" Knowledge And Skills Of Adult Educators In The Department of Adult Education In Anderson County

by

Michael K. Newman

November, 1992

The purpose of this study was to develop a survey instrument that could be used to determine the degree to which faculty perceive themselves to have knowledge and skills that they can use to help their adult students "learn how to learn." Before this project was undertaken, the adult education department of Anderson County did not have a survey instrument of this type.

The Anderson Adult Education Center is one of several public adult education centers located throughout South Carolina. Their mission is to assist students who are at least eighteen years of age and no longer enrolled in secondary education, but who wish to complete the requirements for a high school diploma (HSD) or general educational certificate (GED).

Over the course of time, the Director of Adult Education, through the use of his own surveys, discovered that many of the adult students who were enrolling in his program were dropping out before the completion of their designated course of study. Their reported reasons for terminating their course of study prematurely were basically the same as for dropping out of high school at a previous time: They found the subjects that they studied uninteresting and unhelpful.

The director of adult education believed that a large part of the problem was due to learning difficulties or a lack of "learning how to learn" knowledge and skills on the part of these students. And that this was probably a major reason for their quitting high school as well.

Therefore, the question that followed was: What information needs to be included in a survey instrument designed to assess the "learning how to learn" knowledge and skills of faculty in the Adult Education Department of Anderson County? The subsequent development study resulted in a

survey instrument that could identify perceived strengths and weaknesses of faculty as regards their capability of modeling and teaching their adult students the art and science of learning.

The completed instrument is expected to be administered to all of the sixteen faculty members as soon as is feasible. The results of the summarized data are expected to be used to create a training program to meet the perceived needs of the faculty who will in turn make use of their training as they go about the business of educating their adult students.

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Chapter 1

INTRODUCTION

The Adult Education Department in Anderson County serves adult learners in public school districts one through five who are attempting to complete the requirements for either a high school diploma or its equivalency (GED). The adult learners must be at least age eighteen and no longer enrolled in a secondary education program in order to apply.

There are approximately sixteen part-time, subject certified faculty and two full time administrators who serve a cumulative total annual enrollment of approximately 1500 students (approximately 700 are HSD and GED students). This enrollment includes students who are seeking literacy instruction, adult basic education, English as a second language, commercial driver's license preparation, inter-personal relations training, computer literacy, and self-improvement courses.

According to the data collected by the Director of Adult Education, a large number of these students drop out of their prescribed course of study prior to completion. The Director found this circumstance to be unacceptable and decided to take steps to reduce the number of dropouts (L. Weaver, personal communication, August 5, 1992).

Background and Significance

According to the on-going survey conducted by the Director of Adult Education (L. Weaver, personal communication, August 5, 1992) too many failed adult students who returned to adult secondary education to complete their high school diploma or GED found that the adult education that they received was no different from the type of education from which they had unhappily withdrawn at some previous time. This discovery on their part led to a subsequent failure to complete the prescribed learning; students found the instruction uninteresting and not helpful (according to the survey)--the same reasons why many of them dropped out of school the first time (L. Weaver, personal communication, August 5, 1992).

The Director of Adult Education believed that a large percentage of the adults who returned to secondary education had learning style weaknesses and strengths (among other learning skills deficiencies) that neither he nor his faculty were trained to identify (L. Weaver, personal communication, August 5, 1992). Further, even if they had been able to identify the special learning requirements of these adult students they had neither the knowledge nor skills to design instruction to accommodate them (L. Weaver, personal communication, August 5, 1992).

If the special learning requirements of the adult students could have been identified and accommodated, more students would have persisted to

program completion -- attained a high school diploma or general educational development certificate (GED). It was decided that with some training, faculty members could learn to diagnose their students' cognitive strengths and weaknesses, and adjust their instructional method and learning environment to accommodate student learning needs and preferences (L. Weaver, personal communication, August 5, 1992).

To determine the degree to which faculty members possessed the knowledge and skills necessary to diagnose the learning strengths and weaknesses of their students, and to provide appropriate instruction that would be interesting and helpful, the Director of Adult Education decided to develop a survey instrument to assess "learning how to learn" knowledge and skills of his faculty. At some later time, the instrument could be administered and data tabulated to determine what training faculty would require to both identify and prescribe instructional methods and techniques to accommodate the various learning requirements of their students (L. Weaver, personal communication, August 5, 1992).

Research Question

The research question for this development study was: What information needs to be included in a survey instrument designed to assess the "learning how to learn" knowledge and skills of faculty in the Adult Education Department of Anderson County? The procedures used for

determining the design and content elements of the development process began with a search of the literature.

Chapter 2

REVIEW OF THE LITERATURE

An extensive review of the literature was conducted to gain an understanding of how to design a needs assessment instrument, as well as, to determine some of the learning problems and needs of adult learners. Books, journal articles, audio and video cassettes, unpublished materials, and televised documentaries were viewed and reviewed in an effort to ascertain the developmental process required for designing a needs assessment, and to determine the key elements, as pointed out by experts, that are essential for helping adult students "learn how to learn."

With regard to essential learning skills, the literature revealed serious weaknesses in the American education system as regards providing graduating students with strong skills in problem solving and critical thinking (Kiplinger & Kiplinger, 1989). These weaknesses have led to additional costs to employers, as they have had to provide the education and training their employees needed and did not attain during their formal school years. If the training were not provided by the employers, these employees would be both incapable of performing their jobs at a satisfactory level and nonpromotable.

The literature revealed that rapidly expanding technology, characteristic of the present service and information era, is demanding

workers who are more capable of thinking, solving problems, and workers who can assume greater responsibility for their own learning--knowing "how to learn" (Kiplinger & Kiplinger, 1989).

> The National Research Council now estimates that the occupational half-life, the time it takes for one half of workers' skills to become obsolete, has declined from seven to fourteen years to three to five years. Workers at all levels of the workforce will need basic literacy and cognitive skills enabling them to be lifelong learners and adjust to new work situations (Parnell, 1990, p. 227).

In addition to the retraining demands placed on workers by the decreasing occupational half-life is the need to comprehend and synthesize the volume of information produced in this country that is doubling every two years (Kiplinger & Kiplinger, 1989). Without the knowledge and skills of "learning how to learn" the massive compounding of new information to be comprehended and, thus, necessity for perpetual retraining, workers may be unable to keep up with the ever changing requirements of their jobs (Kiplinger & Kiplinger, 1989).

Education statistics paint a bleak picture of accomplishments and future prospects for producing the skilled and academically-prepared workers of the future. Of the jobs that were and will be created between 1984 and the year 2000, more than fifty percent will require more than a

twelfth grade education, and a four-year degree will be necessary for almost one third of all jobs (Johnston & Packer, 1987; Parnell, 1990). Therefore, more students need to persist in their efforts to complete the requirements for a high school diploma or GED.

Today and tomorrow, "higher levels of language, math, and reasoning skills" (Johnston & Packer, 1987, p. 96) are and will be *sine qua non* for employability. The bad news is that "[t]wenty-seven percent, or one out of four, of high school students do not currently complete their high school program" (Parnell, 1990, p. 211). Too many of these students drop out for a second time after returning to an adult education program for basically the same reasons that they dropped out of secondary education the first time (L. Weaver, personal communication, August 5, 1992).

There are about twenty million adults who are functionally unable to read or write; and, for the last two decades, about the same percentage (34%) of high school graduates go on to college (Parnell, 1990). This modest percentage of high school students who go on to higher education is owing, at least to some extent, to the closely approximating percentage of high school students who drop out of school, and subsequently drop out of adult secondary education as well (L. Weaver, personal communication, August 5, 1992).

In as much as so many students and adult workers are entering higher education or jobs with under-developed levels of academic aptitude "a larger proportion of resources will have to be spent on remediation" (Levine and Associates, 1989, p. 36). This translates into a greater strain on the budgets of colleges and employers to close the gap between skills required and skills possessed.

"It is estimated that more than $30 billion is spent annually by U.S. public and private employers for employee education and training" (Parnell, 1990, p. 247). The trend is for this figure to increase, and for business and industry to enter into more partnerships with education, as well as, increase their own accredited, in-house academic programs (Johnston & Packer, 1987; Kiplinger & Kiplinger, 1989; Parnell, 1990).

> According to Kiplinger and Kiplinger (1989, p. 155), approximately ten million workers are already taking courses every year, at a cost of $40 billion. By 2000, business will invest $80 billion to $100 billion a year in worker training and development, and nearly 10% of the work force will be in some sort of job-training program.

Given the aforementioned facts and projections as delineated by various experts, the school system not only needs to enter into a partnership with business and industry, but needs to do a better job of helping students "learn how to learn" before they enter the workforce and

the global economic system that will require perpetual retraining in order to remain competitive in the world market.

What became very clear when searching the literature in the broad area of what one needs to master in order to become a competent adult learner was the fact that one needs to sift through most of the abstract theory, and focus almost solely on the tried and tested methods, strategies, and concepts that appear to have the most potential for practical application and immediate results.

Therefore, content for the needs assessment or survey instrument was drawn from materials that explained the use of mnemonics (Ellis, 1985), development of reading skills (Carbo, Dunn, & Dunn, 1986), effective preparation for examinations (Ellis, 1985), penmanship and legibility (Ellis, 1985; Olney, 1988), classroom skills (Ellis, 1985), self-directed learning (Schuttenburg & Tracy, 1987), motivation (Magnusson & Perry, 1989), conditions conducive to learning (Knowles, 1980), laws for life management and learning (Tracy, 1989), results of research on learning styles and diagnosing and prescribing instructional strategies for learning preferences (Dunn, Beaudry & Klavas, 1989), various learning styles (Dunn & Dunn, 1993; Carvevale, Gainer & Meltzer, 1990), elements that stimulate learning (Dunn & Dunn, 1993), characteristics and needs of

slower learners (Johns, 1990; Silberman, 1985), and development of critical thinking (Bloom, 1956).

Other knowledge and skills areas that were deemed important by experts when seeking to strengthen the learning capabilities of adult learners were materials that focus on the "how to" techniques for explaining what has been learned (Ellis, 1985), hemispheristic preferences of learners (Dunn, Cavanaugh, Eberle & Zernhausen, 1982), different types of intelligence (Gardner, 1985), sequential steps to problem solving (Tracy, 1989), adult developmental stages including the disstressors, needs, and tasks (Havighurst, 1970), types of adult learners (Houle, 1973), principles of adult education and characteristics of adult learners (Smith, 1982: Merriam & Caffarella, 1991; Brookfield, 1986), philosophies of education (Wiles & Bondi, 1984), and attributes of effective teachers (Baker, Roueche & Gillett-Karam, 1990).

The literature cited above is only the skeleton of a much larger body of information that was both reinforcing of the concepts presented above, and acted to extend the ideas into a broader perspective. The aforementioned material did, however, provide a solid foundation for the key elements that were used to develop the twenty-one statements contained in the survey instrument for determining the working knowledge of adult educators as regards "learning how to learn"

knowledge and skills. Again, the process for selecting the material to be used in the needs assessment was based upon what ideas appeared to be the most practical and immediately useful, or user friendly; theoretical concepts that escaped utility were culled. The next step was to examine what a survey instrument is and how it needs to be packaged.

Before the adult educational institution could provide the "learning how to learn" knowledge and skills to would-be students, faculty needed to be surveyed to determine to what extent they possess such knowledge and skills. Therefore, "[t]he market to be served . . . [had] to be assessed" (Newman, 1987, p. 3) by means of a survey questionnaire or other data collecting instrument.

According to the literature, there are many ways to define or describe what a needs assessment is. McArdle (1990, p. 12) described a needs assessment as "a series of activities conducted to identify problems or other issues in the workplace, and to determine whether training is an appropriate intervention to meet the organizational needs identified."

A needs assessment has also been described as "formally collecting gaps in priority order, and selecting the most important gaps for closure" (Rojas & Mulkey, 1990, p. 35). The needs that are selected for closure become the problems (Rojas & Mulkey, 1990). McNeil (1990,

p. 110) defined need "as a condition in which a discrepancy exists between an acceptable state of learner achievement or attitude and an observed learner state." The assessment is intended to identify and resolve the most critical problems or issues allowing efficient use of resources (McNeil, 1990).

Gill & Fruehling (1979, p. 323) are convinced that "[l]ogic requires that needs be identified prior to the design of programs and services to meet those needs. Failure to do so institutionalizes ineffectiveness and legitimizes irrelevance."

According to Heath (1985, p. 9), "[a] needs assessment is typically seen as a nonrecurring enterprise, of limited duration, contrived to produce results of immediate utility. Heath (1985) described two types of needs assessments: the intensive type involves gathering information, sometimes repeatedly, over a long period of time on the same small group of subjects; the extensive type is used to gather small amounts of data in a single effort from large numbers of subjects. The survey instrument developed in this study will be used repeatedly to assess training needs of faculty over a long period of time.

Armstrong (1989) and Isaac and Michael (1990) all see needs as "what ought to be" compared to "what is" or "the discrepancy between what is and what out to be" (Isaac & Michael, 1985, p. 5). Once the

needs are identified, they are prioritized and become the basis for establishing training goals and measurable objectives (Isaac & Michael, 1990). Pennington (1980, p. 1-2) looked upon needs assessment "as a basis for developing educational activities for adults; . . . [bridging] a gap between a current set of circumstances and [a] . . . desirable set of circumstances. In addition to the above information, a number of other considerations needed to be taken into account before the survey questionnaire was designed.

For example, Fienberg and Tanur (1989) caution would be survey questionnaire designers to keep in mind that surveys are vulnerable to nonresponses and refusals and, therefore, it is important to use as many techniques and strategies, as possible that have proven to be more successful. To further this point, Robertson and Sundstrom (1990) found in their research with questionnaires that when questionnaires immediately address employees' most pressing concerns, they are more likely to answer all the questions and return the surveys. Also, there are higher response rates when issues are presented in order of priority, and demographic questions are at the end of the survey.

"Questionnaires need to be short, contain only questions the answers to which are going to be actually used, avoiding 'interesting' questions" (Buschė, 1992; Psacharopoulos, 1980, p. 161). If the

questionnaire is anonymous, it will generate a higher and better quality response (Psacharopoulos, 1980). A panel of experts chosen from within and outside of the institution need to review the content of the survey questionnaire and offer suggestions for improvement before the survey is implemented (Busché, 1992; Gall, 1986).

McArdle (1990) advises obtaining the support of management and others who will be involved in the needs assessment before undertaking the arduous task of designing the survey instrument. Also "define the issue. A well defined problem is half solved" (McArdle, 1990, p. 12). Then "[s]elect a pilot group" which must be representative of the entire group (McArdle, 1990, p. 13; Pennington, 1980) or survey the entire group, if feasible. The "choosing [of] a sample group" (Johnson, 1982, p. 4) provides an opportunity to test the workability of the survey instrument--helps to get the bugs out.

Since value judgements are unavoidable when choosing specific competencies or issues to be assessed, it is important to bring as much objectivity to the design and analysis of the needs assessment as possible (Pennington, 1980). One way to accomplish this is to solicit input and critical review from disinterested people who are knowledgeable in this area (Gall, 1986). Certain members of the panels of experts were chosen with this in mind.

The needs assessment can be designed to focus on a respondent's opinion about his or her competence in a given subject area, only, or it can also include an assessment of the respondent's competence in a given area with relevance to his or her job, and the desire to make improvements (Misanchuk, 1984). Pecora (1989, p. 405) advocates assessing workers' "inability to perform certain job tasks or functions." He values the practical approach of assessing the frequency with which a worker has the need to use a specific skill, the importance of the skill to the particular position, and the amount of hindrance caused by the worker's current level of skill in performing the particular functions.

According to Newman (1987), when conducting a needs assessment it is not necessary to formulate a hypothesis nor use "elaborate statistical techniques . . . to determine significant differences or similarities" (Newman, 1987, p. 11). A simple reporting of numbers and percentages can provide the information necessary to design a training program to overcome various deficits.

To summarize: "[q]uestionnaires can use statements or questions" (McMillan & Schumacker, 1989, p. 254); an effort should be made to find existing instruments to use or adopt instead of preparing a new one--Isaac and Michael (1990) recommend developing one for each particular situation; prepare a list of objectives to be achieved from the

data collected; consider the audience to whom the information will be presented (Pennington, 1980) and what questions need to be answered; determine what techniques will be employed to acquire the data; make sure key people are aware of and support the study; be aware that people are expecting something to occur after the assessment; test the questions with a sample of the respondent population before carrying out the full-scale survey (Pennington, 1980); determine how the results will be analyzed and reported beforehand; have one person coordinate the study; "[b]oth objective and subjective data should be collected in order to define needs accurately" (Pennington, 1980, p. 80); formulate questions or statements so that the data can be ranked or prioritized; describe the respondent population (Isaac & Michael, 1981); make the questions clear, simple, limited to one idea, and positive in nature (Busché, 1992; McMillan & Schumacker, 1989); and, questions need to be relevant and unbiased.

With regard to the format of the survey questionnaire, McMillan and Schumacker (1989) advise checking grammar, spelling, punctuation, and being careful that the printing is clear and easy to read (Busché, 1992; Department of the Air Force, 1974; McMillan & Schumacker, 1989). Maximize the white space on the instrument in order for it not to appear

too busy or cluttered. "Make instructions brief and easy to understand" (McMillan & Schumacker, 1989, p. 257).

Further, avoid abbreviated items, keep the questionnaire short (in items, not pages), provide ample space for subjective questions, group related items, use a logical sequence, and number the pages and the questions (McMillan & Schumacker, 1989). The data that is finally collected can then be used to design a training program "by sorting the raw information into categories" (McArdle, 1990). The content of the data can then be used to determine the method of training (whether hands-on or lecture, for example), who needs training, and how the outcome of the training will be measured (McArdle, 1990).

All of the preceding expert cautions and recommendations were considered in the development and final design of the survey instrument. Particular consideration was given to the discordant recommendations of Isaac and Michael (1990): that it is best to design an original instrument for each particular study, and to use various survey instruments as a guide for designing one's own; and of McMillan and Schumacker (1989) that an effort should be made to find an existing instrument to use or adopt instead of preparing a new one.

This extensive review of the literature, combined with the statement by (L. Weaver, personal communication, August 5, 1992) the

Director of Adult Education for School District Five that his faculty are using the traditional model of instruction (lecture/textbook, paper/pencil) documented the need to conduct a survey to determine whether the faculty perceive themselves to have "learning how to learn" skills that can be modeled and taught to their adult students.

Chapter 3

METHODOLOGY AND PROCEDURES

The procedures for developing a needs assessment began with an extensive review of the literature to determine how to design a survey instrument. During the literature review specific attention was given to available information regarding the format and content appropriate to this study. The third step was to select the specific content of the survey instrument by identifying the subject areas that may be less understood and applied by faculty in the classroom as regards "learning how to learn" knowledge and skills. The subject areas were identified in the literature on the basis of what the experts said was most important for teachers to understand and use if their intent is to help their students "learn how to learn."

A computer search was conducted to access available literature in both ERIC and the social sciences using the descriptors: learning, learning styles, motivation, study habits, study techniques, study methods, ways to learn, needs assessment, survey, assessment, survey instrument, survey design, questionnaire, questionnaire design, and survey development. In order to organize the forthcoming literature gleaned from the computer search and determine which materials would be used in the survey, two particular pieces of literature were chosen as

expert guides for the content among numerous sources reviewed (Bloom, 1956; Ellis, 1985; Carbo, Dunn, & Dunn, 1986; Carvevale, Gainer & Meltzer, 1990; Dunn, Beaudry & Klavas, 1989; Dunn & Dunn, 1993; Johns, 1990; Knowles, 1980; Magnusson & Perry, 1989; Schuttenburg & Tracy, 1987; Silberman, 1985; Smith, 1982; Tracy, 1989; and others). One was a book widely used by colleges and universities around the country as a study guide for students (Ellis, 1985), and the other was a nationally promoted and highly acclaimed video cassette with an instructional guide for helping students raise their grade point average (Olney, 1988).

These two sources were chosen not only for their popularity, but because they were comprehensive with regard to taking into account the total student experience--from how to read a text book, to overcoming test anxiety. These two books were also helpful from the standpoint of deciding what not to include in the survey. Any subject areas that were not directly related to the student's skills in processing information, that is, organizing, comprehending, retaining, and reporting what was to be learned, were not included. The subject areas excluded were assertiveness and communication skills, meditation, relaxation techniques, building self-esteem, making friends, sexuality, and other peripheral areas that would be far too comprehensive for adult educators

to incorporate into courses whose objectives are to provide instruction in American history, English, or math as examples.

The journal article by McArdle (1990) and the paper by Busche' (1992) were used as models in the same manner as the two materials described above, except in this case they were used for the design and organization of the survey instrument. These two references were chosen because, together, they explained the sequential steps in designing a needs assessment in a concise and clear manner, and how the finished product should look. Johnson's (1982) paper provided a sample survey that seemed to lend itself more to the intent of this study than did other samples. Johnson (1982) used statements (as suggested by McMillan and Schumacker, 1989) instead of questions and used the Lickert descriptors of strongly agree, agree, disagree, and strongly disagree. The category of undecided was added to this survey in order to provide the respondent with a fifth or neutral choice, as recommended by McMillan and Schumacker (1989) in case a statement was unfamiliar or the respondent had no opinion.

Numerous other sources as reported in the literature review (Rojas & Mulkey, 1990; McNeil, 1990; Gill & Fruehling, 1979; Heath, 1985; Armstrong, 1989; Isaac & Michael, 1990; Pennington, 1980; Fienberg & Tanner, 1989; Robertson & Sundstrom, 1990; Psacharopoulos, 1980;

and others) were used to develop the content of the survey instrument based upon the practicability and immediate usability of the concepts and skills presented. From the six eventual subject areas chosen, survey statements were developed (Ramer, 1989) that reflected the experts' views as regards what learners need to know in order to enhance their learning capabilities.

The next step was to incorporate the six broad categories and their content areas into a format that was pleasing to the eye of the respondent--there was to be plenty of white space or unused space on each page, a mixture of small and large print for emphasis and to break up monotony, and it was to have a professional appearance--no grammatical, spelling, punctuation, or typographical errors. Also important was that the questionnaire would not solicit any information that would not be used (Busche', 1992; Psacharopoulos, 1980).

Once the first draft had been completed, a panel of experts were selected both within and outside the center to provide input with regard to the design and content of the survey instrument. The experts were selected based upon their knowledge and experience in the field of education and their prior experience in the development and use of survey instruments. Judgements were made by these experts with regard to whether the questionnaire's "get up" was professional and

pleasing to the eye, would solicit the information being sought, and would do so consistently.

The experts' opinions were aided by a group of six faculty who volunteered, after being asked by the Director of Adult Education, to respond to the survey statements and determine whether they were interpreted by all members of the group in the same way, and whether they reflected areas of training need. The experts and the faculty were asked to meet as many times as needed until they agreed on a final draft of the instrument. The faculty and panels of experts were also instructed to review a memorandum that was attached to the survey instrument to insure its clarity.

Feedback from the sample group was subsequently used to modify any statements or questions that were confusing or that were not interpreted the same way by each member of the sample group (reliability). The refined ambiguous statements were then readministered to the subset until all statements were consistently interpreted the same way by all members of the subset in order to strengthen reliability.

Definitions of Terms

In this study, survey instrument, needs assessment, and survey questionnaire are used synonymously. Survey instrument is defined as: a list of statements or questions requiring a rated response that is used "to identify problems or other issues in the workplace, and to determine whether training is an appropriate intervention to meet the organizational needs identified" (McArdle, 1990, p. 12). In this particular case, the survey instrument was used to identify strengths and weaknesses on the part of adult educators as regards their perceived skills in modeling and teaching adult students how to learn.

Assumptions

In this study, an assumption was made that once the survey instrument was developed, it would be used to conduct a needs assessment at the Anderson Adult Education Center. A second assumption was that the results of the needs assessment would lead to the development of a training program to meet the perceived training needs of the faculty.

Limitations

One limitation of this study was that the faculty's perceived skills of "learning how to learn" were their opinions only and, therefore, may not be a true reflection of their skills or deficiencies. Their supervisor or

fellow colleagues may have a different view of the faculty member than is reported by the members of the study group. Also, the perceived needs of the faculty of this department may not reflect the perceived needs of other faculty in other departments in other school districts, even though validity is strengthened by surveying one hundred percent of the study population (approximately sixteen faculty members).

Further limitations peculiar to surveys in general are: responses may be artificial due to the respondents being made to feel special, some respondents give consistently high or low ratings regardless of the survey content, and biased reactions can be elicited as a direct result of the context of the organizational ramifications or anticipated use of the survey results (Isaac & Michael, 1990).

Chapter 4

RESULTS

More than 70 sources were reviewed from the literature and elsewhere: audio and video tapes, television documentaries, workshops, professional journals, books and magazines, and personal interviews. From these, 46 references were chosen for inclusion in this study based upon their practicality and immediate useability by adult faculty and their adult students. Abstract materials that had no proven utility were culled.

The material included in this study was chosen not only for its practicability, but also because of numerous recommendations by various experts as being most needed by students whose goal is to "learn how to learn" (Bloom, 1956; Ellis, 1985; Carbo, Dunn, & Dunn, 1986; Carvevale, Gainer & Meltzer, 1990; Dunn, Beaudry & Klavas, 1989; Dunn & Dunn, 1993; Johns, 1990; Knowles, 1980; Magnusson & Perry, 1989; Schuttenburg & Tracy, 1987; Silberman, 1985; Smith, 1982; Tracy, 1989; and others). A serious effort was made to cull theories and concepts that were more abstract in nature and did not lend themselves to practical application and immediate usability on the basis of whether the material reviewed explained how the concepts had been put to use in a real situation. If the content of the literature was only theoretical, it was not included in the content of the survey instrument.

From the materials selected, six subject areas were identified and converted into broad categories (learning techniques and methods, motivating adult learners, learning styles, thought processing, characteristics of adult learners, and teacher identity) for use as questionnaire statements (as suggested by McMillan and Schumacker, 1989) to be rated by the adult educators in the subject areas of: memorizing, reading, taking examinations, learning strategies, self-directed learning, motivation, conditions conducive to learning, laws for learning, research on learning preferences, diagnosing learning styles, elements that stimulate learning, slower learners, levels of thinking, ways to explain what was learned, hemispherisity, problem solving, adult development stages, types of adult learners, principles of adult education and characteristics of adult learners, philosophies of education, and attributes of effective teachers. Recommendations by experts in the literature were that one should use categories to group related content in order to make the reading of the statements more coherent (Robertson & Sundstrom, 1990). The number of statements (23) was determined by the quantity of subject areas that were addressed.

The subject areas of the survey were also converted into single item, closed-end or forced choice statements that reflect the various concepts and strategies that can be used to strengthen learning

capabilities (Lindenmann, 1983) for simplicity (to prevent confusion) and for the purpose of soliciting a direct response to a direct statement. If a statement contained more than one idea, neither the respondent nor the surveyor would be able to ascertain to which idea one is to respond or has responded. These statements were worded in a manner that required the respondents to express an opinion regarding their perception of whether they have a working knowledge of the subject area--they understand the material and are capable of using it in the classroom at present. Survey statements were designed this way in order to distinguish between what a teacher has heard about or what is only vaguely familiar as compared to what the teacher actually is capable of using in the classroom. An example of this type of statement would be: I have a working knowledge of seven learning styles.

A five-point Lickert scale with the categories of strongly agree, agree, undecided, disagree, and strongly disagree was chosen as the mechanism for teacher responses because it contains a series of graduations, levels, or values that describe various degrees of sentiment. The respondents are provided with a broad range of possible responses that increases the probability of a more accurate assessment of their perception (McMillan & Schumacker, 1989). The undecided category was used to prevent bias--forcing the respondents to express either

strength or weakness when the statement did not apply, or the respondents had no clear opinion.

The overall "get-up" (Buschė, 1992) of the survey instrument--structure, design, number of pages--was produced in accordance with the recommendations of experts such as McMillan and Schumacker (1989), Pennington (1980), Busche' (1992), McArdle (1990, and others. They recommended keeping the survey instrument short (around 20 questions), simple (use common words and only one idea for each statement, purposeful (use only relevant questions), and group questions into appropriate categories. The quantity of subject matter, less the abstract material that was culled for reasons already described, was limited to what material could be presented and then comprehended by faculty in about eighteen hours or three workshop days. Three days was the maximum time that the Director of Adult Education believed could be provided for this training. Also, the intention was to make the content of the instrument comprehensive with regard to covering the various learning steps and processes that an adult student would experience as brought out by Olney (1988) and Ellis (1985).

Examples of other surveys found in the literature (Department of the Air Force, 1974; Gill & Fruehling, 1974; Heath, 1985; Johnson, 1982; Lindenmann, 1983; Newman, 1987) were examined and ideas were

borrowed and synthesized to create an original instrument for the purpose of this study since none of the existing survey instruments could be appropriately adapted. The ideas that were borrowed included the use of the five-point Lickert scale for respondent rating (McMillan & Schumacker, 1989), the use of statements instead of questions (Ramer, 1989), the overall "get up" of the questionnaire (Busche', 1992), and the idea of creating an original instrument for this particular study (Isaac & Michael, 1990).

Two panels of experts were chosen from within and from without the Adult Education Department to review the first, and later the second and final draft of the survey instrument. The experts were chosen by the survey developer based upon their experience in education, especially with adult students, and their knowledge of and experience with survey instruments.

The two panels or committees of experts who were selected to review the design and content of the instrument, for purposes of validity and reliability, as well as appearance, consisted of the Director and Assistant Director of Adult Education at the site of the study, the Superintendent of School District Five, the Director and the Coordinator of the National Dropout Prevention Center, and the Coordinator and the Research Associate of the Greenwood cluster at Nova University. Each

committee member was given a copy of the original draft of the survey instrument, and two subsequently revised drafts that included recommended changes, for all members to approve before the final copy was typed.

There were only three recommendations for change in the instrument that came from the seven panelists. One was to reverse the order of the Lickert scale from starting with the category of strongly disagree to the category of strongly agree, and the graduated scale that follows. The second change that was suggested and subsequently made was to include in each statement contained in the survey, references and/or examples of answers that would more fully describe the first 21 statements to be rated. An example would be: instead of the statement, "I have a working knowledge of seven learning styles," the statement would include examples of learning styles--visual, tactile auditory, and olfactory. This would give the respondent more clarity as regards what the statement is asking specifically, and greatly reduce any previous feelings of intimidation on the parts of faculty who were unfamiliar with various subject areas on which they were to provide a rating. The actual statement on the survey in this example is: "I have a working knowledge of seven learning styles: Visual, tactile, auditory, olfactory, etc."

The final recommendation led to the inclusion of two additional sections to the survey instrument (statements 22 and 23) in order to more specifically solicit what subject areas of training contained in the survey the faculty would most desire, as well as, areas of training not specifically addressed by the needs assessment (see Appendix). There were no recommendations for changing the design nor format of the survey instrument as it was deemed to be appropriate and acceptable.

A pilot test of the instrument was also conducted with a six member group of faculty to "get the bugs out" of the needs assessment before an actual survey is carried out. The six teachers were selected based upon their expressed interest to the director as regards their willingness to assist in this study. This subset of faculty assisted with improving the reliability of the instrument by identifying which statements on the questionnaire were ambiguous, or not interpreted in the same way by each member of the subgroup. The group members were unclear about statements one, three, four, seven, eight, eleven, thirteen, and sixteen (see Appendix) because there were no examples or references to explain what exactly was being asked or who the source of the information is. Therefore, the statements lacked sufficient clarity and were, therefore, difficult to rate accurately. Statements were rewritten (see Appendix) to include either the source of the material, or examples

that further clarified what was to be rated, until all members of the pilot test group were in agreement with regard to understanding the intent of the statement. This process required two rewrites and, thus, three meetings of the group.

The finished piece was designed for personal completion (conducted in person) by each respondent within regular working hours with the supervisor overseeing the process. Since the statements on the survey will require only the circling of an appropriate number beside each statement, the survey instrument will be relatively quick and easy to score and tabulate.

Finally, after all changes had been incorporated into the final draft of the survey instrument and the accompanying explanatory memorandum, a copy was given to the Director of Adult Education for use in a forthcoming formal survey of his adult education faculty.

Chapter 5

DISCUSSION, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Discussion

From the outset, the survey instrument that was envisioned was intended to be comprehensive and practical. Therefore, during the search of the literature and other sources, there was a commitment to draw upon the best available ideas and procedures for both synthesizing numerous concepts into questionnaire statements, and presenting them in a respondent friendly format.

This effort was successful for several reasons. The use of Ellis' (1985) book, Becoming a Master Student and Olney's (1988) three video cassettes with printed guides, Where There's a Will There's an A, as models for identifying what students need to know in order to be successful academically and, yet, most often not taught nor modeled in the classroom, provided the skeleton from which practical concepts and strategies were selected and supplemented by related sources found in the literature.

Having the commitment and permission of the Director of the Adult Education Program to carry out this study proved most beneficial. Without his willingness to see to it that all six pilot study faculty received

the questionnaire and returned it in a timely manner with sought after input for improvement, there would have been a lessened chance for faculty to feel a sense of ownership and empowerment that is vital to reliable response data.

The reviews of the first two drafts and the final survey questionnaire by the external and internal panels of experts provided both an objectivity and organization savvy that was needed to bring wholeness to the design and content of the survey instrument. The external experts included academics who not only had personal experience with conducting organizational needs assessments, but who were familiar with the work of scholars in this technical area. The internal experts who were very familiar with their faculty, as well as with the organization's culture, were able to determine what was and was not realistic for the Anderson Adult Education Center. Because of these insiders' and outsiders' recommendations, the validity of the instrument was strengthened.

The guidelines used for the design and development of the needs assessment, including what was chosen as content, was consistent with that described in the literature (Bloom, 1956; Busche', 1992; Carbo, Dunn, & Dunn, 1986; Carvevale, Gainer, & Meltzer, 1990; Dunn, Beaudry, & Klavas, 1989; Dunn & Dunn, 1993; Ellis, 1985; Johns, 1990; Johnson,

1982; Knowles, 1980; Magnusson & Perry, 1989; Olney, 1988; Schuttenburg & Tracy, 1987; Silberman, 1985; Smith, 1982; Tracy, 1989; and others). As a result of following the recommendations and advice of the various experts, the progression of the survey instrument development proceeded through the various sequential phases of: conceptualization and design; initial draft of the instrument; revision, and preparation of a second draft; and final review and revisions.

Conclusions

In order to develop a needs assessment that is comprehensive, practical, and respondent friendly, it is essential to first formulate a clear and concise purpose. In this study the particular purpose was to develop a survey instrument that could be used to determine the degree to which faculty perceive themselves to have knowledge and skills that they can use to help their adult students "learn how to learn." An extensive literature search and review must then follow from which can be gleaned appropriate materials for content, and guidelines for structure, design, and overall get-up of the proposed instrument.

Specific subject areas need to be identified and synthesized into an appropriate and inclusive number of single item, closed-end statements or questions that clearly solicit responses that can be used to produce a solution, or training program to satisfy perceived needs. The

survey instrument designed for this study included 21 single items, closed-end statements, a summative question asking the respondent to give an overall view of what training areas in the survey would be most beneficial, and an open-ended statement intended to solicit additional training areas not included in the survey subject areas. The statements on the survey instrument covered the specific concepts of: memorization, reading, examinations, learning strategies, self-directed learning, motivation, learning conditions, laws of learning, research on learning styles and their diagnosis, understanding learning styles, elements that stimulate learning, slower learners, thinking levels, explaining what has been learned, hemispherisity, problem solving, stages of adult development, types of learners, characteristics of adult learners, philosophies of education, and attributes of effective teachers. These content areas, according to the experts in the literature, cover the complete learning experience of the adult learner, as well as provides an understanding of who the adult learner is, and what is needed from others to make learning a successful experience.

The use of both inside and outside agency experts, and conducting a pilot test, provided the needed scrutiny for validity and reliability of the survey instrument. Also, adherence to the above ideas and many others found in the literature has produced a sound survey

instrument that can assess the "learning how to learn" knowledge and skills of adult educators.

Implications

A needs assessment can be developed that will assess the "learning how to learn" knowledge and skills of adult educators, but it must not be looked upon as a one-shot deal. The needs assessing activity should be an on-going process or formative evaluation of the ever-changing educational system and its staff.

A literature review, along with a little creativity, can provide the needed information for the sometimes arduous task of designing the structure, format, and appropriate content for a survey instrument that is professionally prepared, and accurately reports, respondent needs.

Recommendations for the Improvement of Practice

The needs assessment developed in this study should be used to identify underdeveloped levels of academic aptitude, (in this case, perceived "learning how to learn" deficiencies on the part of adult educators), and, thus, a subsequent "learning how to learn" skills training program should become a future core segment of the Anderson County Adult Education Department orientation and continuing inservice training program. The learning skills training should also be considered as a

possible pre-requisite for new faculty who are seeking employment with the Anderson Adult Education Center (L. Weaver, personal communication, August 5, 1992).

One indirect improvement that could come as a secondary benefit of this training is the instillment of a uniform set of "learning how to learn" knowledge and skills and a concomitant vernacular with which educators can use to cross fertilize one another with the art and science of helping other maturing adults "learn how to learn."

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APPENDIX

Survey of "Learning How to Learn"

Methods and Techniques

MEMO

TO: Faculty of Adult Education Department
Anderson County

FROM: Michael Newman, Needs Assessment Designer

SUBJECT: Survey of "Learning How to Learn" Methods and Techniques

DATE:

PURPOSE: To explain the survey

This survey of adult educators' working knowledge of "learning how to learn" methods and techniques is intended to assess the teaching staff's familiarity with the various techniques and methods that can be employed to enhance an adult student's learning capability.

Your candid response is vital to making this survey successful, as it has the potential for clearly defining what areas of training would be most appropriate for equipping present and future faculty with learning skills that can be transferred to their students.

All responses will be strictly confidential (do not sign your name). A summary of the responses of all respondents will be given to each participant; and, appropriate training based on the results of this survey will be made available.

If you have any questions, please address them to Mr. Lloyd Weaver and he can call me if he needs any additional clarification.

Thank you for your kind assistance.

Michael K. Newman MSW, LISW

To the right of the statement, circle the number of the response that most nearly reflects your agreement or disagreement --

(5) strongly agree, (4) agree, (3) undecided, (2) disagree, (1) strongly disagree

Thought Processing	(Segment Four)

I have a working knowledge of . . .

13.	Bloom's six levels of thinking and how to use them to promote critical thinking: analysis, synthesis, evaluation, etc.	5	4	3	2	1
14.	several ways to explain what has been learned: compare, contrast, analyze, criticize, enumerate, prove, etc.	5	4	3	2	1
15.	right and left brain (hemispheristic) behaviors and preferences: analytic/global, inductive/deductive processing; thinking in pictures instead of concepts; sequential learning compared to wholistic learning, etc.	5	4	3	2	1
16.	Tracy's eight steps to problem solving: defining the problem as a challenge or situation, approaching efficaciously, seeking cause, generating possible solutions and resources, etc.	5	4	3	2	1

Characteristics of Adult Learners	(Segment Five)

17.	adult developmental stages and their characteristics: chronological tasks and desired outcomes, needed skills and/or knowledge, age groupings (18-22), etc.	5	4	3	2	1
18.	three types of adult learners: goal-oriented, activity-oriented, etc.	5	4	3	2	1
19.	principles of adult education or characteristics of adult learners: using past experiences as resources, focusing on here and now problem solving, andragogy, time constraints, quick learning, etc.	5	4	3	2	1

To the right of the statement, circle the number of the response that most nearly reflects your agreement or disagreement --

(5) strongly agree, (4) agree, (3) undecided, (2) disagree, (1) strongly disagree

Teacher Identity	(Segment Six)

I have a working knowledge of . . .

20. five philosophies of education: liberal, behaviorist, progressive, etc. 5 4 3 2 1

21. Baker, Roueche & Gillette-Karam's attributes of effective teachers: facilitate student's own learning, see value in learning, value experiential learning, etc. 5 4 3 2 1

22. Now that you have read the foregoing statements with brief descriptions of the subject areas deemed valuable by the experts when helping students "learn how to learn," could you benefit from specialized training in:

Please respond to only one of the following (A, B, or C):

A. all of the above subject areas Yes ____ No ____

B. most of the above subject areas Yes ____ No ____

C. a few of the above subject areas Yes ____ No ____
(please circle all of the statement numbers on which training would be desired):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

23. Please list any additional areas of training that you would find beneficial or would prefer instead of the 21 areas above with regard to understanding your students' learning needs and how to accommodate them:

1. _____
2. _____
3. _____
4. _____
5. _____

Thank you for your cooperation in completing this survey.